

ABSTRACT

A method for controlling both the scattering and absorption of electromagnetic waves. The method is based on prescribing the sizes of the particles that are suspended in a specified medium and a ratio of the refractive indices of the particles and the medium. This method can be used in applications that require maximizing or minimizing scattering of electromagnetic waves. The present method can also be used in applications that require maximizing or minimizing absorption of electromagnetic waves. Further, the invention provides control of backscattering (radar cross section) and, controlling any combination of scattering, absorption and backscattering of electromagnetic waves. Applications for the present method include stealth technology, friend or foe identification, and defensive screening.